

## CLAIMS

1. A recombinant DNA encoding a chimeric recombinant protein, comprising

- at least two first nucleotide fragments each encoding an epitope region
- at least a second nucleotide fragment encoding a linking region,
- at least a third nucleotide fragment encoding an attaching region,

characterized in that each first nucleotide fragment encodes at least one immunodominant region of the gp120 glycoprotein of HIV-1, of the gp41 glycoprotein of HIV-1 group M, of the gp41 glycoprotein of HIV-1 group O or of the gp36 glycoprotein of HIV-2.

2. The DNA as claimed in claim 1, characterized in that said first nucleotide fragment has as its sequence any one of the sequences SEQ ID No.°3, SEQ ID No.°5, SEQ ID No.°7, SEQ ID No.°9, SEQ ID No.°27, SEQ ID No.°29 or SEQ ID No.°31.

3. The recombinant DNA as claimed in either one of claims 1 and 2, characterized in that said second nucleotide fragment comprises at least one cleavage site.

4. The recombinant DNA as claimed in any one of claims 1 to 3, characterized in that said second nucleotide fragment has as its sequence at least any one of the following sequences, taken alone or in combination, SEQ ID No.°11 SEQ ID No.°13, SEQ ID No.°15, SEQ ID No.°17, SEQ ID No.°19, ou SEQ ID No.°20, SEQ ID No.°33, SEQ ID No.°35, SEQ ID No.°37, SEQ ID No.°39, SEQ ID No.°41, SEQ ID No.°43 SEQ ID No.°45, or SEQ ID No.°47

5. The recombinant DNA as claimed in any one of claims 1 to 4, characterized in that said third nucleotide fragment encoding an attaching region is included in said second nucleotide fragment encoding a linking region.

6. The DNA as claimed in any one of claims 1 to 5, characterized in that said third nucleotide fragment has as its sequence any one of the sequences SEQ ID No.°21, SEQ ID No.° 23, SEQ ID No.°25, SEQ ID No.°33, SEQ ID No.°35, SEQ ID No.°37 or SEQ ID No.°39.

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7. A chimeric recombinant protein encoded by a recombinant DNA as claimed in any one of claims 1 to 6, comprising

- at least two epitope regions of the HIV-1 virus group M or group O or the HIV-2 virus,
- at least one linking region,
- at least one attaching region.

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8. The protein as claimed in claim 7, characterized in that said linking region is a peptide comprising at least one glycine and/or at least one serine.

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9. The protein as claimed in claim 8, characterized in that said linking region has as its sequence any one of the sequences SEQ ID No.°12, SEQ ID No.°14, SEQ ID No.°16 or SEQ ID No.°18, 34, 36, 38, 40, 42, 44, 46 or 48.

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10. The protein as claimed in claim 7, characterized in that said attaching region is a region rich in histidines and derivatives thereof, such as a region containing a density of histidines greater than or equal to 25%, and preferably greater than or equal to 33%.

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11. The protein as claimed in claim 7, characterized in that said attaching region is a peptide comprising at least one lysine.

12. The protein as claimed in claim 7, characterized in that said attaching region has as its sequence SEQ ID No.°22, 24 , 26, 34, 36, 38 or 40.

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13. An expression vector comprising a recombinant DNA as claimed in any one of claims 1 to 6.

5 14. The use of at least one DNA as claimed in any one of claims 1 to 6 and/or of at least one chimeric recombinant protein as claimed in any one of claims 7 to 12, for in vitro diagnosis.